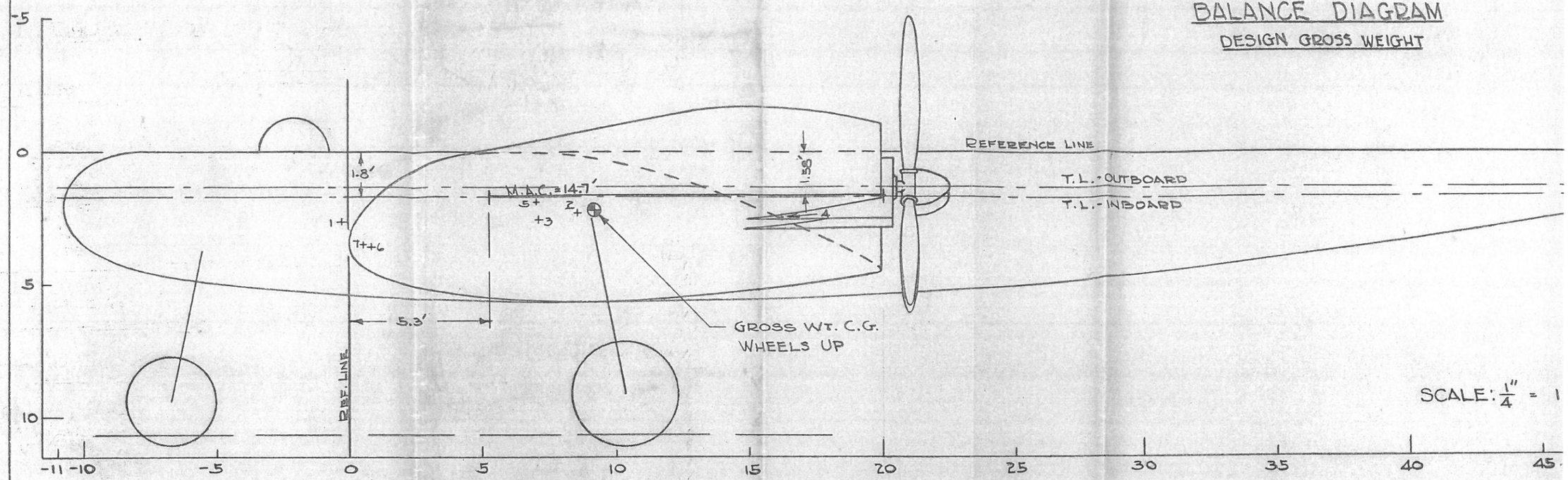
BALANCE DIAGRAM

DESIGN GROSS WEIGHT



SCALE: $\frac{1}{4}'' = 1$

HORIZONTAL C.G.

REFERENCE LINE = L.E.W (ROOT SECTION)
M.A.C. = 14.7 FT.
L.E. M.A.C. AFT OF REFERENCE LINE = 5.3 FT.

$$C.G. = \frac{9.21 - 5.3}{14.7} = \frac{3.91}{14.7} = 26.6\% \text{ M.A.C.}$$

VERTICAL C.G.

REFERENCE LINE = TOP LINE OF FUSELAGE
BELOW REFERENCE LINE = 2.15 FT.
M.A.C. BELOW REFERENCE LINE = 1.58 FT.
C.G. BELOW M.A.C. = 2.15 - 1.58 = 0.57 FT.

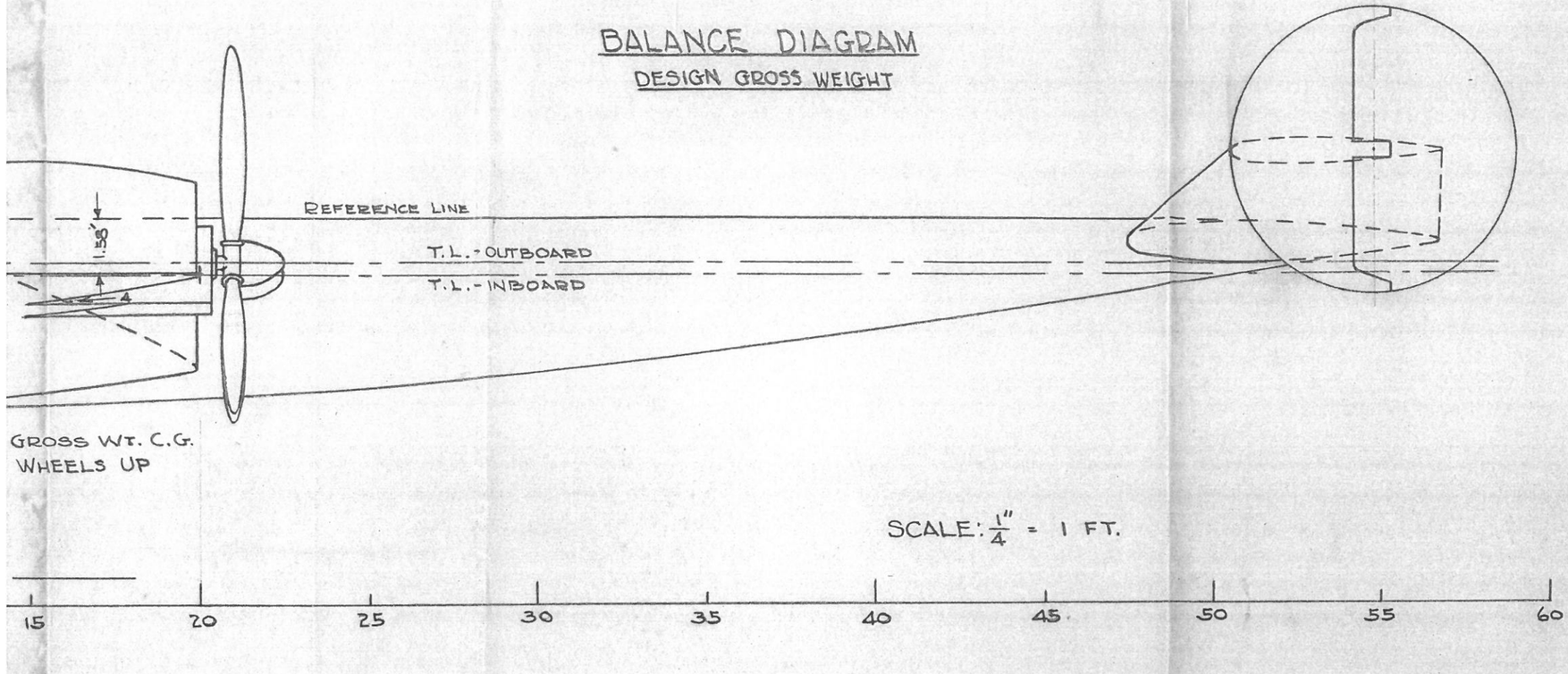
$$C.G. \text{ IN \% M.A.C.} = \frac{.57}{14.7} = 3.9\% \text{ M.A.C.}$$

NO.	ITEM	WEIGHT POUNDS
1*	CREW & PARACHUTES	1800
2	FUEL (2800 GALS. AT 6.*/GAL.)	16800
3	OIL (175 GALS. AT 7.5*/GAL.)	1312
4*	FLEXIBLE GUNS	964
5*	BOMB INSTALLATION	2669
6*	PYROTECHNICS	108
7*	EQUIPMENT	1284
	DESIGN USEFUL LOAD	24937
	WEIGHT EMPTY	32240
	DESIGN GROSS WEIGHT	57177

*FOR DETAIL BREAKDOWN, SEE PAGE 14

BALANCE DIAGRAM

DESIGN GROSS WEIGHT



I.A.C.

NO.	ITEM	WEIGHT POUNDS	HORIZONTAL ARM	HORIZONTAL MOMENT	VERTICAL ARM	VERTICAL MOMENT
1*	CREW & PARACHUTES	1800	- 27	- 486	2 64	4752
2	FUEL (2800 GALS. AT 6.#/GAL.)	16800	8 6	144480	2 3	38640
3	OIL (175 GALS. AT 7.5#/GAL.)	1312	7 1	9315	2 5	3280
4*	FLEXIBLE GUNS	964	16 17	15588	2 43	2347
5*	BOMB INSTALLATION	2669	7 05	18823	1 83	4871
6*	PYROTECHNICS	108	8	86	3 52	380
7*	EQUIPMENT	1284	64	823	3 45	4431
	DESIGN USEFUL LOAD	24937		188628		58371
	WEIGHT EMPTY	32240		338186		64379
	DESIGN GROSS WEIGHT	57177	9 21	526814	2 15	122750

*FOR DETAIL BREAKDOWN, SEE PAGE 14